

WHAT IS CLAIMED IS:

1. A data storage device for storing and accessing data in tracks on a medium, each track having a data layout comprising:
 - a first data section;
 - a second data section;
 - a third data section;
 - a first spin pad located between the first data section and the second data section and having a first length; and
 - a second spin pad located between the second data section and the third data section and having a second length that is different from the first length.
2. The data storage device of claim 1 wherein the data layout further comprises a reference mark before the first data section.
3. The data storage device of claim 2 wherein the first length is a function of the distance from the reference mark to a beginning of the first spin pad.
4. The data storage device of claim 3 wherein the second length is a function of the distance from the reference mark to a beginning of the second spin pad.
5. The data storage device of claim 3 wherein the first length is further based on a worst case delay in detecting the reference mark.

6. The data storage device of claim 1 wherein the first data section comprises a data block.
7. The data storage device of claim 6 wherein the first data section further comprises a gap.
8. A method of determining the length for a spin pad section in a track layout of a storage medium, the method comprising:
 - determining a nominal time period between a detection of a reference mark and a beginning of the spin pad; and
 - using the nominal time period to set the length for the spin pad.
9. The method of claim 8 wherein using the nominal time period to set the length comprises:
 - determining a nominal time span for the spin pad; and
 - converting the nominal time span into a length.
10. The method of claim 9 wherein determining a nominal time span comprises multiplying the nominal time period to the beginning of the spin pad by a rate factor that is based on the speed of a head moving over the storage medium.
11. The method of claim 10 wherein the rate factor is based on a fastest expected speed for the head and a slowest expected speed for the head.

12. The method of claim 9 wherein determining the nominal time span comprises determining a maximum delay in detecting the reference mark and using the maximum delay as part of determining the nominal time span.

13. The method of claim 8 wherein determining the nominal time period between a detection of a reference mark and a beginning of the spin pad comprises determining a nominal time span for an early spin pad located between the reference mark and the beginning of the spin pad.

14. The method of claim 8 wherein determining the nominal time period between a detection of a reference mark and a beginning of the spin pad comprises determining a nominal time span for a block of data.

15. The method of claim 14 wherein determining the nominal time period between a detection of a reference mark and a beginning of the spin pad further comprises determining a nominal time span for a gap after the block of data.

16. A data storage medium capable of storing data and having a track layout comprising:

- a first data section and a second data section; and
- overwrite protection means in the layout for preventing the first data section from overwriting the second data section based in part on the length of the first data section.

17. The data storage medium of claim 16 wherein the overwrite protection means comprises a spin pad.
18. The data storage medium of claim 17 wherein the spin pad has a length that is based in part on the length of the first data section.
19. The data storage medium of claim 18 wherein the spin pad has a length that is based on a distance from a reference mark to the beginning of the spin pad.
20. The data storage medium of claim 19 wherein the spin pad has a length that is a linear function of the distance from the reference mark to the beginning of the spin pad.
21. The data storage medium of claim 16 wherein the first data section comprises a data block.
22. The data storage medium of claim 21 wherein the first data section further comprises a gap.